R E M A R K S

The last amendment to claim 1 deleted almost an entire clause but, through inadvertence, left a number of words undeleted. This resulted in a meaningless hanging phrase that even the Examiner simply ignored. The current amendment to claim 1 merely corrects the error and places the claim in the form that was considered by the Examiner.

Claims 26 and 27 were rejected under 35 USC 112. Because of a typographical error the dependence of claims 26 and 27 was not changed to depend on claim 1. However, the Examiner properly assumed this dependence, so the current amendment merely places the claims in the form that was considered by the Examiner.

It is respectfully requested that the Examiner enter this amendment.

Claims 28 and 29, which were rejected, are canceled in order to expedite prosecution.

Claims 1, 2, 5, 6, 23, and 24 were rejected under 35 USC 103 as being unpatentable over Behzad Shahraray and David Gibbon "Automatic Generation of Pictorial Transcript of Video Program," Feb 1995, Proceedings of SPIE 2417 Multimedia Computing and Networking, 1994 (Shahraray et al) in view of Tim Berners-Lee and Robert Caillian, "The World-Wide Web," 23 Sep 1992, Computing in High Energy Physics 92 (Berners-Lee et al). Applicants respectfully traverse.

Claim 1 includes the step of

> responding to a keyword search by a user, performed on said second
> information-bearing media component stored by said step of recording,
> where a pictorial transcript that is responsive to said keyword search is
> configured for presentation to said user in form of pages, at least some
> of which are interconnected by hypertext links.

The Examiner does not assert that the Shahraray et al reference teaches or suggests this step, but does discuss the Berners-Lee et al reference. Specifically, that Examiner points to the 1st paragraph of section "operation" and quotes

> Hypertext alone is not practical when dealing with large sets of
> structured information such as are contained in data bases: adding a
> search to the hypertext models gives W3 its full power (fig. 1). Indexes
> are special documents which, rather than being read, may be searched.
> To search an index, a reader gives keywords (or other search criteria).

What this teaches is that indexes that reflect documents are created, and the search is performed on the index. Presumably, links to documents that are responsive to the index

are inserted into a web page, and the web page is presented to the user. There is no teaching, however, of any action that takes the "a pictorial transcript that is responsive to said keyword search" and configuring it "for presentation to said user in form of pages, at least some of which are interconnected by hypertext links." Therefore, it is respectfully submitted that claim 1 is not obvious in view of the Shahraray et al and Berners-Lee et al combination of references.

Claims 2, 5, 6, 23, and 24 depend on claim 1.

Claims 3, 7-10, 16, 18-22, 26, and 27 were rejected under 35 USC 103 as being unpatentable over the combination of Shahraray et al, Berners-Lee et al and US Patent 5,708,825 (Sotomayor). Applicants respectfully traverse.

Claim 3 is canceled.

Claim 7 depends on claim 5, which depends on claim 1. Additionally, claim 7 specifies that retrieved hypertext pages are "presented to said user in a scheme selected from a plurality of schemes by said user." What this addresses, is what the user <u>sees</u>; not what is stored in the database. In connection with this limitation, the Examiner points to the teachings in the Sotomayor reference to the effect that there are summary page templates that can be modified. Those templates, however, are used for creating summaries from documents and the created summaries are stored in the database. Once those summaries are stored, NO mechanism exists in the Sotomayor reference for the user to have pages presented to the user "in a scheme selected from a plurality of schemes by said user." Therefore, it is respectfully submitted that claim 7 is not obvious in view of the Shahraray et al, Berners-Lee et al and Sotomayor combination of references.

Claim 8, which depends on claim 7, specifies that one of the schemes for presenting a hypertext pictorial transcript is one that "configures said pictorial representation to present to said user all of said representative frames of said hypertext pictorial transcript." Claim construction principles lead one to conclude that the other schemes of the "plurality of schemes" do something <u>other than</u> presenting to the user "all of said representative frames." Such an arrangement is not described in the Sotomayor reference and, therefore, it is respectfully submitted that claim 7 is not obvious in view of the Shahraray et al, Berners-Lee et al and Sotomayor combination of references.

Claim 9 depends on claim 8. Additionally, claim 9 specifies a scheme that focuses on reducing retrieval time of the transcript "for presentation to said user." Again, what that means is that some schemes do not do that, and when selecting a scheme that does not present a subset of the representative frames and, therefore, does not reduce the retrieval time of the transcript for presentation to the user, then the retrieval time is longer than when the scheme specified in claim 9 is used. This has nothing to do with what was stored in the database in the first place, which is what the Examiner focuses on. Therefore, it is respectfully submitted that claim 9 is not obvious in view of the Shahraray et al, Berners-Lee et al and Sotomayor combination of references.

Claims 10 and 16 depend on claim 9. Additionally, applicants again point out that the focus is on what is presented to the user (following retrieval) rather than what is initially stored.

Claims 18-21 depend on claim 1.

Claim 26 specifies that the hypertext pages that are configured for presentation to the user are "divided based on topic segmentation." In rejecting the claim, the Examiner points to col. 15, lines 23-26 of the Sotomayor reference, which teaches that the summary page generator – which creates that which is stored and is accessible for retrieval – creates a hyperlink from each key-topic entry in the summary page to an instance of that key topic in the presentation. Respectfully, that simply teaches that the summary document has hyperlinks. It teaches nothing about division of either the summary or the presentation into pages; by topic or otherwise. Therefore, it is respectfully submitted that claim 26 is not obvious in view of the Shahraray et al, Berners-Lee et al and Sotomayor combination of references.

Regarding claim 27, it specifies that hypertext pages are divided based on a change in closed-caption format. The Examiner points to the Sotomayor teaching of parsing presentation pages to identify topics, and inserting anchors (hyperlinks) to identify the topics. While it can be said that this is an identification of topics in the presentation pages, it is not a division of the presentation into pages based on topic. This is clear in FIG. 10, where more than one topic is found in the illustrated presentation page. There is no teaching in Sotomayor that the presentation pages are created based on any particular characteristic, or trigger; and certainly there is no teaching in Sotomayor

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that the presentation pages are created with any regard to the <u>format</u> of anything; be it the closed captions, or otherwise. The Examiner points to FIG. 10, but it is noted that, in addition to the presentation pages not being created (as *pages*) based "change in closed-caption format," the same is true for the summary pages." At best – and it is not that it is so – the index pages are created in pages based on the initial letter of a topic ("concept entry"), which of course is not the same as "closed-caption format." Therefore, it is respectfully submitted that claim 27 is not obvious in view of the Shahraray et al, Berners-Lee et al and Sotomayor combination of references.

Dependent claim 11 was rejected under 35 USC 103 as being unpatentable over Shararay et al, Berners-Lee et al, Sotomayor, and US Patent 5,699,458 (Sprague). Applicants respectfully traverse. Claim 11 specifies a step of replacing substantially redundant frames with hypertext anchors. In rejecting the claim the Examiner points to the Sprague teaching in col. 10, lines 42-46, where the text states:

> Alternatively, a "thumbnail video sequence" may be transmitted to allow browsing of the video sequence itself, which comprises a thumbnail version of each intracoded frame within the video sequence. This would allow the view to efficiently preview the movie before downloading the entire sequence."

It is not known what an "intracoded frame" is (there is no other reference to intracoded anything, although there is a reference to an intra-picture coding). However, regardless of what the "video sequence" of thumbnail versions of intracoded frames is, it is a sequence of thumbnail images that are created from full-fidelity images (and supplement the full-fidelity images), and the most adverse statement that can be made is that the thumbnails sequence is an *en masse* replacements for the full-fidelity images. Thumbnails, however, are not hypertext anchors. Moreover, there is no comparison between a sequence of thumbnail images and something that comprises frames representative of video segments and, at times (where the frames are replaced), hypertext anchors. Therefore, it is respectfully submitted that claim 11 is not obvious in view of the Shahraray et al, Berners-Lee et al, Sotomayor and Sprague combination of references.

In the response to arguments the Examiner points to the above-quoted text, stating that "Sprague discloses all frames that are not I frames are replaced as disclosed lines 42-46 of column 10. As applicants read the text pointed to by the Examiner, that is NOT what the text teaches. "I frames" are not even mentioned in the text.

Therefore, it is respectfully submitted that claim 11 is not obvious in view of the Shahraray et al, Berners-Lee et al, Sotomayor and Sprague combination of references.

Dependent claim 12 was rejected under 35 USC 103 as being unpatentable over Shahraray et al, Berners-Lee et al, Sotomayor, and US Patent 5,664,227 (Mauldin et al). Applicants respectfully traverse. Claim 12 specifies removing "alternating ones of sequentially occurring representative frames." In rejecting the claim the Examiner points to the teachings in Mauldin et al where "nonrepresentative" frames are removed. Clearly that teaches away from claim 12 where some representative frames are removed. Moreover, removing frames based on whether the frame is representative or not is totally different from simply removing every other representative frame. In the response to arguments the Examiner effectively asserts that it is a matter of semantics; that Mauldin chooses to call removed frames "non-representative," and that applicants choose to call the removed frames "representative." Applicants respectfully disagree. A "representative frame" in applicant's application is not a merely semantic designation; and removing alternate ones of those frames is removing frames of equal stature. Mauldin et al, on the other hand, clearly employ some criterion for determining what is a representative frame and what is not. This is evidenced, for example, in the following text

> After time-stamping at step 233, each video paragraph may then be reasonably abstracted by a representative frame and thus be treated as a unit for context sizing or for an image content search. At least a portion of this task is done by content-independent statistical methods which detect image changes, for example, key frame detection by changes in the DCT coefficient. Alternatively, representative frames may be selected as those which correspond to the most important audio segment selected at step 237 and as described herein.

> With reference to FIG. 3, there is shown a series of video frames collectively referred to by the numeral 60. Clips 64a, 64b, 64c, and 64d are selected which are representative of each video paragraph. Each video paragraph is time stamped at step 233. The time stamp is used as an index back to the unedited video and may also be used for loose correlation with the audio portion of the skimming function.

> Thereafter the representative clips 64a, 64b, 64c, and 64d are compressed and assembled at step 235. The step 235 removes the nonrepresentative frames 62 from the series of video frames 60 to create a skimmed video 68 as shown in FIG. 4. The skimmed video 68 comprises the representative frames 64a, 64b, 64c, and 64d

Thus, in Mauldin et al the notion of a "representative" or a "nonrepresentative" frame is also not a matter of semantics. Representative frames and nonrepresentative frames of different stature.

Therefore, it is respectfully submitted that claim 12 is not obvious in view of the Shahraray et al, Berners-Lee et al, Sotomayor and Mauldin et al combination of references.

Claims 13 and 14 were rejected under 35 USC 103 as being unpatentable over Shahraray et al, Berners-Lee et al, Sotomayor, and US Patent 5,764,235 (Hunt et al). Applicants respectfully traverse. The Examiner admits that the combination of Shahraray et al and Sotomayor does not "expressly disclose" the limitations of claims 13 and 14 but asserts that Hunt et al disclose those limitations.

Applicants responded substantively that, in applicants' view, Hunt et al do NOT disclose that which the Examiner asserts, and that they do NOT disclose the limitations of claim 13 and 14. The Examiner points to text pertaining to blocks 1108, and quotes that "thus, blocks 1114 and 1116 combine to limit the file size to the server_size, which is the maximum file size that the web server is willing to support." This, however, teaches limiting the size of a file, but it does not teach _removing_ frames based a criterion related to image size. In other words, the claim limitations that the Examiner admits are not taught by the Shahraray et al and Sotomayor prior art (and which Berners-Lee also does not teach) AND WHICH the Examiner asserts is taught in Hunt et al, is NOT taught in Hunt et al.

In the Response to Arguments the Examiner asserts that applicants attacked the references individually rather than based on combination of references. Applicants respectfully disagree.

If a claim specifies a combination of element A+B+C, and an Examiner admits that references X and Y do not teach this combination and that, in particular, they do not teach element C, if the Examiner asserts that reference Z teaches C, it suffices for an applicant to demonstrate that reference Z does NOT teach C. Such a demonstration suffices because if applicant is correct, then the existence of reference Z is wholly immaterial to the patentability of A+B+C and one is left with only references X and Y and an admission by the Examiner that X and Y do not teach A+B+C.

To state applicants' position affirmatively, it is respectfully submitted that since Shahraray et al, Berners-Lee et al and Sotomayor do not teach removing representative frames below (or above) a prescribed image size, and since the Hunt et al reference fails to teach this combination, it is applicants' view that the combination of Shahraray et al, Berners-Lee et al, Sotomayor and Hunt et al does not make claims 13 and 14 obvious.

Claim 15 was rejected under 35 USC 103 as being unpatentable over Shahraray et al, Berners-Lee et al, Sotomayor, and Shahraray "Scene Change Detection and Content-Based Sampling of Video Sequences," 1995, SPIE 2419, pp 2-13 (Shahraray II). Applicants respectfully traverse.

The Examiner admits that Shahraray et al and Sotomayor do not teach the limitation stated in claim 15, and applicants believe that the Berners-Lee reference also does not teach this limitation. What the Examiner does assert is that Shararay II teaches this limitation, pointing to the section 2.1 of the reference.

In response to the same rejection in the previous Office Action applicants agreed that the reference teaches identifying short boundaries. Admittedly, finding such boundaries involved determining differences between adjacent images. However, as pointed out in response to the previous rejection, the notion of detecting shot boundaries does not teach or suggest (a) **removing** (b) **representative** frames at all, regardless of reason; and (c) it certainly does not teach or suggest removing representative frames (i.e., wherever they occur in the transcript) that differ from other representative frames by less than a prescribed amount.

In the Response to Arguments, the Examiner asserts

> Thus, the teachings are directed to detecting "different shots" and not shots where the representative frames are "extremely similar" as applicant argues.

Respectfully, applicants made no such argument. Applicants assertion was, and is, as stated above. The only sentence where the phrase "extremely similar" is found in applicants' previous filing is in the sentence

> That is, one can have two wholly different scenes, with a proper detection of shot boundaries, and the representative frames of the two scenes can be extremely different, or extremely similar.

This is merely a description of a situation that can occur. It is not an assertion regarding any teachings anywhere. In short, it is respectfully submitted that the Examiner

somehow misread or misunderstood applicants' arguments. Applicants respectfully submit that claim 15 is not obvious in view of Shahraray et al, Berners-Lee et al, Sotomayor, and Shahraray II combination of references.

Claim 17 was rejected under 35 USC 103 as being unpatentable over Shahraray et al, Berners-Lee et al, Sotomayor, and US Patent 5,693,093 (Iggulden et al). Applicants respectfully traverse.

The Examiner admits that Shahraray et al and Sotomayor do not teach the limitation stated in claim 17, and applicants believe that the Berners-Lee reference also does not teach this limitation.

The Examiner asserts, however, that Iggulden et al teach this limitation. The rejection is the same as was made in the previous Office Action, and applicants explained that the Iggulden et al reference teaches scanning past commercials information. That is, Iggulden et al teaches storing something on a video tape, and upon playback, a "commercial cluster" is "scanned past during playback of the recorded videotape" (quotes from passage quoted by the Examiner). There appears to be no disagreement that this is what the reference teaches because in the Response to Arguments the Examiner only disagreed with applicants' assertion that scanning past presented information is different from removing representative frames. Respectfully, applicants still hold to this view and point out that the entire effort that is the subject of claim 17 is part and parcel of the effort to configure for hypertext presentation that is retrieved in response to a keyword search by the user, and in an effort to reduce retrieval time (see claim 9). That is, the removing of commercial segments as a means to reducing retrieval timethat which is presented in response to a keyword search is wholly different from merely skipping over commercial portions in a playback of a recorded video tape (and which, additionally, does not reduce retrieval time). Therefore, it is respectfully submitted that claim 17 is not obvious in view of Shahraray et al, Berners-Lee et al, Sotomayor, and Iggulden et al combination of references.

I light of the above amendments and remarks, it is respectfully submitted that all of the Examiner's objections and rejections have been overcome. Reconsideration and allowance are respectfully solicited.

Respectfully,
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